STORE DATA SET DATA USING SPREAD MEMORY LAYOUT — 11

↓

MAP SUBSETS OF DATA SET TO SPECIFIC PARTS OF QUICK ACCESS MEMORY — 13

FIG. 1

↓

KEEP PROC. PARAMETERS (BUFFERS, VALUES, TABLES ETC.) IN OTHER PARTS OF QUICK ACCESS MEMORY, EFFECTIVELY INHIBITING OVERWRITE BY DATA SET DATA — 15

↓

IMAGE PROCESSING — 17

19

29

INSTRUCTIONS

PROCESSOR — 21

23

ON-CHIP CACHE

VOXELS (MAIN MEMORY)

CALL FOR VOXELS

00-3F 40-7F 80-BF C0-FF — 25

43

44

41

43

39

44

43

31 35 33

44

43

SECONDARY CACHE

27

FIG. 2

FIG. 3

ON-CHIP CACHE

00-3F 40-7F 80-BF C0-FF

FIG. 4

4 KByte Boundary

32 Bytes

TAG | 32 Bytes

128 Cache Entries

TAG | 32 Bytes

Main Memory

32 Bytes

4 KByte Boundary

FIG. 7

Screen Tile

One Iteration

90

91	Part of Volume Data Set	2K
92	Tilebuffer and Parameters, CPU I	1K
95	Opacity/Color Table 0	1K
91	Part of Volume Data Set	
93	Empty	
95	Opacity/Color Table 1	
91	Part of Volume Data Set	
93	Empty	
95	Opacity/Color Table 2	
91	Part of Volume Data Set	
93	Empty	
95	Opacity/Color Table 3	
91	Part of Volume Data Set	
92	Tilebuffer and Parameters, CPU II	
95	Opacity/Color Table 4	
91	Part of Volume Data Set	
93	Empty	
95	Opacity/Color Table 5	
91	Part of Volume Data Set	
93	Empty	
95	Opacity/Color Table 6	

4K

16K

and so on for entire data set
Memory area for CLUTs is empty as well after
CLUT15

FIG. 5

FIG. 6

101

107

109

A 103, 107

107

107

107

B 105, 107

107

107